

### **REMARKS**

In response to the above-identified Office Action (“Action”), Applicant traverses the Examiner’s rejection to the claims and seeks reconsideration thereof. Claims 1-6 are now pending in the present application. In this response, claims 1, 2 and 3 have been amended, and no claims have been added.

#### **I. Claim Amendments**

Applicant respectfully submits herewith amendments to claims 1, 2 and 3. Applicant respectfully submits claim 1 is amended to clarify that the dendrimer structure has symmetry along three dimensions. Support for the amendment to claim 1 may be found, for example, on page 4, lines 12-14. Claim 2 is amended to replace the wording “is” to correctly recite “as.” Claim 3 is rewritten to recite the claimed chromophores in proper form to overcome the Examiner’s rejection under 35 U.S.C. §112. In view of the foregoing, Applicant respectfully submits the attached amendments to claims 1, 2 and 3 do not add new matter and are supported by the specification. Applicant respectfully requests consideration and entry of the attached amendments to the claims.

#### **II. Claim Rejections – 35 U.S.C. §112**

In the outstanding Office Action, claim 3 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant respectfully submits the attached amendment to claim 3 in which the claim has been rewritten to clearly recite the chromophores intended to form part of the claimed invention.

For at least the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 3 under 35 U.S.C. §112, second paragraph.

### III. Claim Rejections – 35 U.S.C. §102

A. In the outstanding Office Action, the Examiner rejects claims 1-3 under 35 U.S.C. §102(a) as being anticipated by Do et al., “*Nonlinear optical materials containing organic chromophores of dendrimer structures: Synthesis and Optical properties*”, (Photonics Conference 2002) (“Do 2002”). Applicant respectfully traverses the rejection for at least the reason that Do 2002 is not a proper reference.

It is axiomatic to a finding of anticipation that the relied upon reference set forth each and every element of the rejected claim.

It is well settled that under 35 U.S.C. §102(a), an applicant’s own work is not prior art unless that work is such as to constitute a statutory bar under 35 U.S.C. §102(b). See In re Katz, 687 F.2d 450, 454, 215 USPQ 14 (CCPA 1982). As is evidenced by the Declaration pursuant to 37 C.F.R. §1.132 submitted herewith, the Do 2002 publication relied upon by the Examiner is Applicant’s own work. Moreover, as evidenced by the Examiner’s withdrawal of the rejection of claims 1-3 under 35 U.S.C. §102(b) in the instant Office Action, the Do 2002 reference does not constitute a statutory bar under 35 U.S.C. §102(b). Thus, for at least the foregoing reasons, Do 2002 may not serve as prior art under 35 U.S.C. §102(a).

In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-3 under 35 U.S.C. §102(a) over Do 2002.

B. In the outstanding Office Action, the Examiner rejects claims 1 and 3-5 under 35 U.S.C. §102(b) as being anticipated by U. S. Patent 6,252,025 issued to Wang (“Wang”). Applicant respectfully traverses the rejection for at least the following reasons.

In regard to claim 1, Wang fails to teach “organic chromophores coupled with the ends of a polymer having a dendrimer structure based on ester linkages and/or ether linkages, the dendrimer structure having symmetry along three dimensions” as recited in amended claim 1. The Examiner alleges column 1, line 57- column 2, line 6 of Wang teaches the use of dendrimer structured polymers. See Office Action, page 5. Applicant respectfully submits, this portion of

Wang merely provides background information and references a process for preparing dendrimers used in U.S. Patent 5,098,475, not Wang. Moreover, at the end of this section Wang teaches against the use of dendrimers in pointing out that dendrimers are typically prepared through lengthy multi-step synthesis and their availability is limited to a small group of functional monomers and therefore industrial production of dendrimers is limited. See Wang, col. 2, line 4-6.

Thus, Wang instead teaches the use of hyperbranched polymers with photographically useful groups. As pointed out in the previous response, U.S. Patent Nos. 5,587,441 and 5,587,446 referenced by Wang to illustrate examples of the hyperbranched structures used in Wang, expressly distinguish hyperbranched polymers from dendrimers. In particular, U.S. Patent Nos. 5,587,441 and 5,587,446 recite that “[i]n contrast to hyperbranched polymers, regular dendrimers are regularly branched macromolecules with a branch point at each repeat unit” See U.S. Patent Nos. 5,587,441, column 2, lines 47-51 and 5,587,446, column 2, lines 43-48. U.S. Patent Nos. 5,587,441 and 5,587,446 further distinguish hyperbranched polymers from dendrimers on the basis of the different processes used to obtain the structures. Thus, it is clear from the teachings of both Wang and U.S. Patent Nos. 5,587,441 and 5,587,446 incorporated by reference into Wang, the disclosed hyperbranched polymers may not be relied upon to teach Applicant’s claimed “organic chromophores coupled with the ends of a polymer having a dendrimer structure based on ester linkages and/or ether linkages, the dendrimer structure having symmetry along three dimensions” as recited in amended claim 1. .

For at least the foregoing reasons, Wang fails to teach each of the elements of claim 1 therefore anticipation may not be found. Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. §102(b) over Wang.

In regard to dependent claims 3-5, these claims depend from claim 1 and incorporate the limitations thereof. Thus, for at least the reasons discussed in regard to claim 1, Wang fails to teach each of the elements of claims 3-5 therefore anticipation may not be found. Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 3-5 under 35 U.S.C. §102(b) over Wang.

**IV. Claim Rejections – 35 U.S.C. §§102/103**

In the outstanding Office Action, the Examiner rejects claim 6 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Wang. Applicant respectfully traverses the rejection for at least the following reasons.

Claim 6 depends from claim 1 and incorporates the limitations thereof. Thus, for at least the reasons discussed in regard to claim 1, Wang fails to teach or suggest at least the element of “organic chromophores coupled with the ends of a polymer having a dendrimer structure based on ester linkages and/or ether linkages, the dendrimer structure having symmetry along three dimensions” as found in claim 6. In addition, the Examiner alleges claim 6 may be anticipated and/or obvious over Wang because the composition of the prior art is the same as that of the claim. Applicant respectfully disagrees with the Examiner’s conclusion for at least the reasons previously discussed. In particular, Wang fails to teach or suggest a composition including “chromophores coupled with the ends of a polymer having a dendrimer structure” and “the dendrimer structure having symmetry along three dimensions.”

For at least the foregoing reasons, Wang fails to teach or suggest each and every element of claim 6. Since each element of the claim is neither taught nor suggested by the reference, neither anticipation nor a *prima facie* case of obviousness may be established. In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 6 under 35 U.S.C. §102(b) or, in the alternative, under 35 U.S.C. §103(a) over Wang.

**CONCLUSION**

In view of the foregoing, it is believed that all claims now pending, namely claims 1-6, are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.

Respectfully submitted,

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Dated: May 19, 2006

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia 22313-1450.

  
Jean Svoboda

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